Drop in Oil Prices Causes U.S. LIFO Reserves significant Drop in Tax Liability from U.S. GAAP to IFRS Transition for Oil Industry- Who Cares?

Peggy Ann Hughes, Ph.D
Assistant Professor of Accounting
School of Business
College of New Jersey
Ewing, New Jersey, 08628-0718

Louis Nucci, B.S.
School of Business
College of New Jersey
Ewing, New Jersey, 08628-0718

Abstract

The United States is now in a position where adoption of International Financial Reporting Standards (IFRS) is unquestionable. However an adoption date seems always on a moving horizon. Harmonization efforts continue to shrink the disparity between U.S GAAP and International IFRS. Among the many changes imposed by IFRS is the implementation of FIFO or average cost as an inventory pricing method. There has been little actual progress in addressing this issue. It has been thought that switching to FIFO would affect industries with billions of dollars in LIFO reserves resulting in billions of dollars in tax obligations. The petroleum industry is the industry which utilizes LIFO the most extensively, representing approximately two thirds of the US LIFO reserve. However, the recent dramatic drop in oil prices has significantly dropped the LIFO reserve in the industry. While the accounting issue is not a tax issue per se, the requirement that any U.S. company using LIFO for taxes has to use the method for financial reporting purposes makes it a tax issue which could be changed. However, no one seems interested.

Keywords: LIFO, FIFO, IFRS, Oil.

1. History of LIFO

The use of LIFO began in 1938 as America was rebounding from the Great Depression. Companies were faced with rampant inflation, and LIFO was permitted by Section 22(d) of the Revenue Act of 1938 for two industries, those with inventories of non-ferrous metals and leather hides. Within months, Senator Harrison and Robert Douglas, Chairman of the Committee on Ways and Means, requested legislative changes to allow LIFO use for all taxpayers. Congress approved a change to allow all taxpayers to use LIFO by the Revenue Act of 1939(Carpenter, 2012). It was used then, as it is now, as a way to manage earnings. Why would any company choose to pay higher taxes? They would not. Therefore, only an act of Congress and/or a change in accounting methods requirement by the FASB or SEC, would force US companies to change from LIFO.

An alternate method of valuing inventory is the FIFO method which utilizes inventory that is considered the oldest. One clear distinction that FIFO has over LIFO is that it more accurately corresponds to the actual flows of inventory a company experiences. A company, such as a grocery store or technology company is more likely to sell off old inventory before it sells the newer inventory. LIFO on the other hand considers the most recently acquired inventory as sold before the oldest inventory. Under LIFO the cost of goods sold would be higher than if it were calculated under FIFO, assuming a steady rate of inflation. Although some companies may state that they use LIFO because it best matches its business operations, the truth of that statement is highly unlikely. As Carpenter, et. al. state, “It is rare for a company to specifically and consistently sell their most recently acquired inventory first. It seems clear that the predominant reason for interest in the LIFO method of inventory costing was for its ability to defer income taxes.”

1.1. U.S GAAP vs. IFRS Inventory Valuation

The authoritative literature for GAAP on inventory valuation states:

Cost for inventory purposes may be determined under any one of several assumptions as to the flow of cost factors, such as first-in first-out (FIFO), average, and last-in first-out (LIFO). The major objective in selecting a method should be to choose the one which, under the circumstances, most clearly reflects periodic income" (ASC 330-30-9).

Under U.S GAAP and Internal Revenue Code Section 472(c) companies that elect to use LIFO must use this method when preparing their financial statements of the current year and years prior. Since management must use LIFO for both financial and tax purposes, the decision to choose an inventory valuation method is one that focuses on either minimizing taxable income or maximizing financial income. Firms have been choosing to minimize taxable income, even if this does not correlate to actual flows of inventory. IAS 2 describes IFRS view on the valuation of inventory.

The objective of IAS 2 is to prescribe the accounting treatment for inventories. It provides guidance for determining the cost of inventories and for subsequently recognizing an expense, including any write-down to net realizable value. It also provides guidance on the cost formulas that are used to assign costs to inventories (IAS 2).

Under IFRS, LIFO is no longer a valid valuation method. Companies under the IFRS method of accounting must prescribe to using inventory valuation methods such as Net Realizable value, lower of cost or market, or FIFO. Inventory methods under IFRS better match revenues to expenses than LIFO. For items that are interchangeable, IAS 2 allows the FIFO or weighted average cost formulas. [IAS 2.25] The LIFO formula, which had been allowed prior to the 2003 revision of IAS 2, is no longer allowed (IAS 2.25).

1.2. Government Attempts To Remove LIFO

While it may be financially unfavorable to companies if they are mandated, there are two major forces that are supporting a change to move from LIFO. The first is the political front (Plummer, 2011). Since 2005 Congress and the Bush administration has been attempting to stop the usage of LIFO for publicly traded companies, starting with the petroleum industry. This attempt was repealed and in 2006 Senate Republican leaders proposed permanently repealing LIFO for all taxpayers to help fund a $100 per family gas tax rebate. This act was also repealed. Finally, in 2007, Congress attempted to end LIFO for all taxpayers which would raise an estimated $100 billion in taxes. This too was repealed. The Obama administration picked up the LIFO reform after the Bush administration identified a great tax revenue benefit by having companies change from LIFO. The administration outlined a plan in 2012 to “write up their beginning LIFO inventory to its FIFO value. The increase in a company's taxable income due to a LIFO write-up would be recognized in equal amounts over a 10-year period. According to the proposal, LIFO repeal would generate $52.9 billion of additional tax revenues over the 10-year period from 2012 through 2021"(Mozes, 1997). The excess in revenues would help the administration close the gap on the large budget deficit. The significant drop in oils prices at the end of 2014, extending into 2015, resulted in the significant drop in LIFO reserves. This decrease diminishes the prize for Congress to have funds to allocate to other projects.

The second group supporting the change from LIFO was foreign companies and governments (Bloom, 2009). LIFO does not do a good job at matching current revenues with costs, as it matches new inventory with recent revenues. The rest of the world follows other inventory methods such as FIFO and weighted average which do a better job of matching revenues and costs. If U.S companies are mandated to change to IFRS inventory standards, international companies would be able to produce universal accounting statements that could be easily compared around the world. This would certainly help U.S based companies who have subsidiaries in other countries, as foreign subsidiaries would be using the same financial reporting methods as the parent company.

2. The LIFO Conformity Requirement under IRC Section 472(C)

Congress has allowed a number of different assumptions and techniques to be used between financial and taxable income. These include methods of depreciation and differences in the timing of the recognition of many revenues and expenses. Why can’t LIFO be treated in the same manor? Internal Revenue Code Section 472(C) requires taxpayers who use LIFO for federal income tax purposes to use the same method for financial reporting purposes.

3. Analysis of Crude Oil Prices

As petroleum industries make up the bulk of the LIFO reserves in the Fortune 500, it is important to understand how world events and societal trends can impact the value of crude oil and its effect on the LIFO reserves. One such event that affects oil prices is a shrinking supply of oil. Here is an example from 2005:

The Iraqi oil ministry's backtracking on oil-production forecasts comes as sabotage and looting continue to hammer the industry, which has yet to export a single barrel of freshly produced oil since the war ended. Yesterday, Iraqi officials reported yet another pipeline explosion, the sixth such incident of sabotage in two weeks. The country was exporting roughly two million barrels a day before the war began in March; output now is below one million barrels (Bahree, 2005).

A large portion of the oil the world consumes comes from the Middle East and this production was disrupted when America launched operation Desert Shield in the early 2000s. Production fell to about half its normal production of two million barrels. The constant political unrest and sabotage on the oil pipelines helped to keep the price of crude oil relatively high. Coupled with the fact that America was using large amounts of oil to supply its war machine, the massive demand and lower supply caused crude oil to stay high in price, around $70 dollars a barrel when this article was written in 2005 (Bahree). Subsequently, by 2008, the price did rise to $110 a barrel. While shrinking supply caused oil to go up in price, a massive surge in demand for it had also helped to keep the price high. As many Americans became wealthier because of the housing bubble that occurred in the late 2000s, they were able to purchase higher priced commodities.

This was one of the driving reasons why economic growth was able to keep pace with higher oil prices. The U.S was not alone in supporting such a high cost in oil as the rest of the world was also developing at fast pace and needed oil. The world was expected to grow at a rate of 4.3% in 2005 and in order to support this growth a large quantity of oil was needed. The Bush administration suggested this high price was because of the speed of industrialization in China. Later, it was observed to be the result of speculators. The financial crash in fall 2008 crashed the price of oil to $40 a barrel (see Figure 1). There after rising to the mid-$70 range. The advent of tracking in the United States brought a huge supply of oil to the market that was not available before. By the beginning of 2015 oil crude prices had dropped to its lowest level in years to below $45.00 a barrel (See Figure 2).

Figure 1: Crude Oil Prices 2006 to 2014

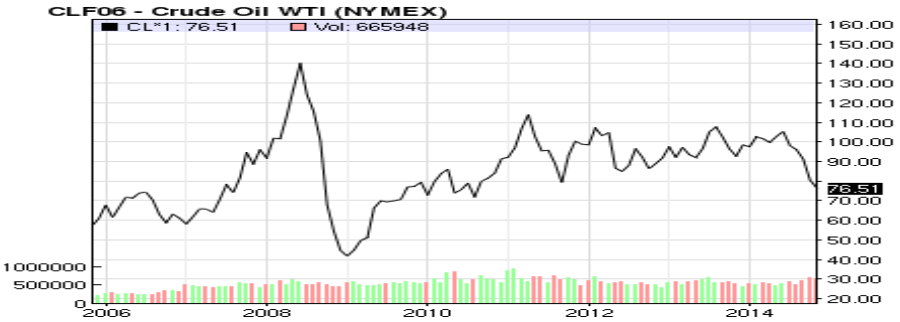
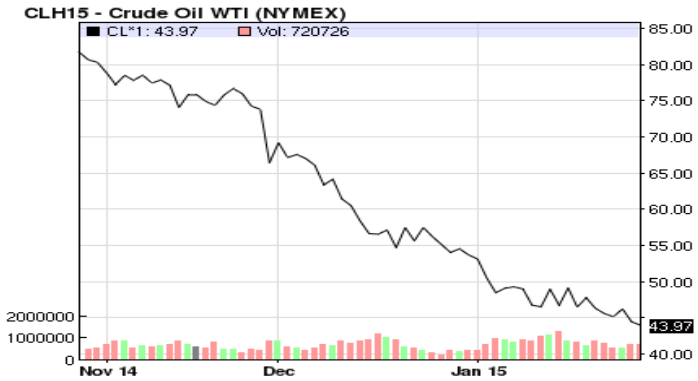


Figure 2: Crude Oil Prices Nov. 14, 2014 to Jan. 31, 2015



4. Consequences Moving From LIFO

One of the largest industries to be affected by the ultimate change from LIFO is the petroleum industry. Exxon alone estimates that "the cumulative difference -- or "LIFO reserve" -- between the value of inventory it was carrying on its balance sheet based on initial cost versus the current replacement cost of that inventory was $15.4 billion in 2013. That was the largest LIFO reserve of any publicly traded company to date (Exxon Annual Report, 2013). Exxon greatly reduces its taxable liability by utilizing LIFO. While LIFO is keeping Exxon's financial income relatively high, the real cost will come with the adjustment to the company's cost of goods sold. If Exxon was to change from LIFO in 2013, cost of goods sold would have increased by roughly $21.2 billion. With a marginal tax rate of about 44.00%, the company was looking at paying a tax bill of approximately $9.3 billion. With the drop in oil prices in 2014, the tax cost to eliminate LIFO has dropped to $4.6 billion.

While the petroleum industry does make up most of the LIFO dollars in terms of the reserve, many other industries utilize this inventory method as well. If a universal change is required of public companies to abandon LIFO, the amount of taxes owed could be staggering. Companies would have to value inventory at the lower of cost or net realizable value and can determine the cost of the inventory using FIFO or weighted average. Using the methods permissible under IFRS allows a company to maximize financial income at the expense of paying more taxes. The company will, however, better match its revenues to the flows of inventory which justifies abandoning LIFO for improved financial reporting. Extending the payment over ten year would lessen the burden.

Table 1: LIFO by Industry

INDUSTRY GROUP	LIFO RESERVE 2008	LIFO RESERVE 2014
Petroleum Refining	56,722.2MM	18,741MM
Industrial and farm Equipment	4,455.8MM	1,528MM
Chemical	3,541.9MM	2.576MM
Motor Vehicle and Parts	2,920.3MM	1.413MM
Metals	2,741.6MM	1.877MM

2008 data from Hughes, et.al, 2009; 2014 data from annual reports

5. Analysis of LIFO Reduction and Commodity Pricing

Some industries are facing a massive tax liability from their extensive use of the inventory method. Data demonstrates that LIFO reserves have dropped significantly in the U.S. between 2008 and 2014. This could have occurred from decreasing inventory or from decreasing prices for the commodities sold. Table 1 presents the LIFO reserves for the Fortune 500 by industry for 2008 and 2014.

As seen from the table, the petroleum industry is by far the largest user of LIFO, ahead of the second largest user (Industrial and Farm Equipment, which is primarily John Deer) by about $52 billion in 2008 (Hughes, 2009). Petroleum Refining is dominated by Exxon-Mobil, which had a LIFO reserve of $21.3 billion in 2008, and $10.6 billion in 2014 (per annual reports).

Table 2: LIFO Reserves $(000) And Inventory Turns In Oil & Gas

		2010	2011	2012	2013	2014
XOM	EXXON MOBIL					
LIFO Reserve		21,300	25,600	21,300	21,200	10,600
Inventories - Total		12,976	15,024	14,542	16,135	16,678
Inventory Turn				21	18	18
CVX	CHEVRON					
LIFO Reserve		6,975	9,025	9,292	9,150	8,135
Inventory Turn		5,493	5,543	6,144	6,380	6,505
TURN				27	25	19
COP	CONOCOPHILLIPS					
LIFO Reserve		6,794	840	200	160	6
Inventories - Total		5,197	4,631	965	1,194	1,331
Inventory Turn				33	25	25
RDS-A	ROYALDUTCH SHELL					
LIFO Reserve						
Inventories - Total		29,348	28,976	30,781	30,009	19,981
Inventory Turn				13	13	14
BP	BRITISH PETROLEUM					
LIFO Reserve						
Inventories - Total		26,218	25,661	27,867	29,231	18,373
Inventory Turn				12	11	
SUM: LIFO INTEGRATED OIL & GAS		35,069	35,465	30,792	30,510	18,741

6. Inventory Turns for Oil and Gas

Table 2 shows that inventory turns for major oil companies have been relatively constant over the past few years, showing inventory turns at less than one month. It is interesting to note that the U.S. oil companies on LIFO turn their inventory twice as fast as international firms on FIFO. That infers that U.S. based oil firms need to strip inventory to their lowest levels possible to maintain their LIFO inventory values. If inventory turns are 12 or greater, which they are in the oil and gas industry, it is highly unlikely there is a significant difference in the price of the inventory they are selling with the inventory they are buying in the same month. See Table 2. The inventory turns are twice as fast for US GAAP based oil companies than European firms like BP and Royal Dutch Shell using IFRS. U.S. firms keep tighter inventories to avail themselves of LIFO values that may be as old as ten years.

7. Roles for SEC and FASB Choosing Best Accounting Method

The government has offered several options to spread the tax liability over time to ease the transition. Congress has backed out from legislation to do this, but it may eventually pass. The government will likely pass this legislation if it sees an economic use for the proceeds. While this will only affect the tax reporting, it will force companies to use it for financial reporting purposes due to current regulations. The change from LIFO to the other methods, primarily FIFO, to improve the quality of financial reporting would have to come from the Financial Accounting Standards Board, and the Security and Exchange Commission. The lack of attention to this glaring inferior inventory treatment by using LIFO, in the face of the requirement by the International Standards Board to abstain from using LIFO, demonstrates the clear political and lobbying power of the oil and gas industry. Crude oil prices have increased some for their low at $45, and will continue to fluctuate, but it does not seem likely the price will substantially increase in the near future. According to the Department of Energy (May, 2014), oil producers worldwide seemingly have no interest in being the first player to cut back on record-setting production. In the US, domestic production of crude oil for the last week of May, 2015, reached 9.59 million barrels a day, a level last seen nationwide in June 1971 (44 years ago).

Oil production by their 12-nation OPEC cartel reached a 2 ½ year high of 31.22 million barrels a day in May, 2015. OPEC oil ministers met at the beginning of June 2015 and rejected any plans to reduce its supply of crude oil. Congress could change Internal Revenue Code Section 472(C) to allow companies to continue to use LIFO for tax reporting purposes if it chose to do so. The SEC and the FASB could chose to disallow use of LIFO to comply with IFRS, and because LIFO values do not match current value perspective. In addition, how can regulators justify using inventory values significantly lower than inventory turns would demonstrate? It appears no one cares.

The United States has used what was considered the best set of accounting standards in the world prior to the development of the International Accounting Standards. By joining the 120 other countries, the United States would have to give up the authority it now has to maintain its own set of rules. That does not appear to be a desired outcome. The United States is a more litigious society and a change in the rules from the current specific rules called Generally Accepted Accounting Rules (GAAP) to the international rules (IFRS) which are less specific, would make it easier to sue businesses. Instead it appears the United States regulators will continue to maintain their own set of rules, while working on concert with the international community to remain in sync as much as possible. LIFO could still be eliminates as an accounting treatment, but there appears to be either no energy behind that effort, or very effective pressure for the oil and gas industry to leave it just as it is.

8. Conclusion

In conclusion, this paper analyzed LIFO and the effects it has on various Fortune 500 industries, particularly the petroleum industry. Supporting LIFO numbers were pulled from various balance sheets to illustrate the enormous amount of LIFO currently in use today. It was found that companies have actually been reducing their inventory levels over the past few years, and significantly in 2014 due to a massive drop in oil prices. The rapid inventory turns approximating a two week turn demonstrate the need to lower inventory to hit LIFO price targets. International oil firms turn inventory slower than US firms, since they do not benefit from the use of LIFO. Now would be a good time to eliminate LIFO for U.S. financial reporting for the following reasons:

1. LIFO is inconsistent with the flow of inventory in practice.
2. Technology advances have decreased the amount of inventory on hand at all levels as observed by reduced inventory turns.
3. LIFO price levels represent costs incurred in years prior to any existing inventory such that a company which never has zero inventory could use a LIFO layer 50 years old when the inventory on hand may be less than three years or less.
4. The Petroleum industry has inventory turns between two and three weeks and has no justification for needing LIFO for economic reasons, other that delaying taxes.
5. The inflationary pressures which existed at the time LIFO was created no longer exist.
6. It would bring U.S. GAAP closer to matching IFRS.
7. Now is a good time to transition out while the tax liability for companies is at a low level compared to previous periods.
8. LIFO is not supported by valid inventory levels, and therefore ethically irresponsible for regulators to support.

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